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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
09 341,921	07 21 1999	BERND BESSLING	47699	5757

26474 7590 04 15 2002
KEIL & WEINKAUF
1350 CONNECTICUT AVENUE, N.W.
WASHINGTON, DC 20036

EXAMINER

MANOHARAN, VIRGINIA

ART UNIT	PAPER NUMBER
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1764

9

DATE MAILED: 04 15 2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/341,921

Applicant(s)

BESSLING ET AL.

Examiner

Virginia Manoharan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2-28-01.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delannoy (EP '323 in view of Coffey or Gilman et al.

Delannoy and Coffey are applied for the same combined reasons as set forth at page 4 of the previous office.

Applicant's arguments filed February 28, 2001 have been fully considered but they are not persuasive.

Applicants' arguments with regards to Delannoy such as: "... The high ethylene oxide content of the bottom phase is deliberately chosen, since there is no increased release of monomeric formaldehyde from the bottom phase, owing to the low temperatures corresponding to the high ethylene oxide content.... However, the formaldehyde concentration in the top product is still much higher than according to the present invention, i.e. from 0.0025 wt.% (=25 ppm) to 0.0015 wt.% (= 15 ppm), as stated in column 3, lines 63 and 64 of Delannoy..." are not persuasive of patentability because of the following reasons:

The argued "formaldehyde concentration in the top product" is only a desired result like the "high ethylene oxide content of the bottom phase" that are "deliberately chosen" as

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recognized by applicants. However, choosing process conditions for optimization purposes is within the skilled of the art and therefore is not indicative of criticality nor is it unobvious.

Delannoy disclosing (col. 2, lines 62-66) that it is normally advantageous that a liquid stream leaving the column at its bottom only contains a limited percentage of ethylene oxide present and further disclosing (col. 3, lines 3-7) that "the amount of formaldehyde ... can vary within rather broad limits" tells a person that an optimum relevant amounts exists in the process for separating ethylene oxide from aldehyde impurities by distillation. Whether an amount of experimentation may be needed, however, said experimentation is of the essence on the level of ordinary skill in the art. Nonetheless, the claimed argued concentrations above i.e., at the top and bottoms of the columns are obvious in view of Gilman et al.

Furthermore, applicants' argument that "...Delannoy in view of Coffey cannot render the present invention obvious, since Coffey uses an extractive distillation in order to achieve the low formaldehyde content in the top product. No hints is given in Coffey that the same goal can be achieved without using an extractive distillation by simply conducting the process as set forth in instant claims 1 and 3, i.e. introducing the feed at a specific minimum height...." is not considered well-taken.

Contrary to applicants' assertion, Coffey introduces the feed at the specific minimum height as claimed. See e.g., Fig. 3 drawings where the introduction point is shown between the 50 and 5th trays above the bottom i.e., at least 8 theoretical stages as claimed. There is a difference of 8 trays between the 58th and 60th trays. The argued extractive distillation process

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of Coffey and Gilmanis not precluded by the claims reciting "comprising", which is an all-inclusive term.

Thus, in the absence of anything which may be "new" or "unexpected result", a *prima facie* case of obviousness has been established by the art and has not been rebutted.

Unexpected results must be established by factual evidence. Mere arguments or conclusory statements in the special, applicant's amendments, or the Brief do not suffice. In re Linder, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972). In re Wood, 582, F.2d 638, 642, 199 USPQ 137, 140 (CCPA 1978).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Manoharan whose telephone number is (703) 308-3844. The examiner can normally be reached on Monday-Friday from 7:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Marian Knode, can be reached on (703) 308-4311. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

V. Manoharan/dh

November 30, 2001

[Handwritten signature]

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12/3/01